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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,237	10/31/2000	Barry Thomas Lee		2625

27209 7590 02/24/2005

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EXAMINER

MICHALSKI, JUSTIN I

ART UNIT	PAPER NUMBER
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2644

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/703,237	Applicant(s) LEE ET AL.	
	Examiner Justin Michalski	Art Unit 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) 21-43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 6-20 is/are rejected.
- 7) ☐ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10-31-00</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of elected claims 1-20 in the reply filed on 21 September 2004 is acknowledged. The traversal is on the ground(s) that group I is not independent and distinct. This is not found persuasive because group I and II are related as combination and subcombination as stated in the action mailed 8 September 2004.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claim 1-3 and 12-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Kitano et al. ("Kitano") (US Patent 6,681,019).

Regarding Claim 1, Kitano discloses an audio signal phase detection system for detecting signal phase reversals within an audio system comprising: an audio signal source generating an audio signal having a first frequency component (Kitano discloses a white noise generator which inherently will contain a first audio frequency component)

having a selected polarity that is marked by a second frequency component (Kitano discloses a low pass filter and selecting a positive-phase or negative phase, Col. 5, lines 29-48) that is distinguishable from the first frequency component, the audio signal source being coupled to provide the audio signal to the audio system (Fig. 1); and a phase detector coupled to receive a representation of the audio signal from the audio system, the phase detector detecting the marking of the first frequency component by the second frequency component and providing an indication as to whether or not the first frequency component has the selected polarity at the occurrence of the mark (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Regarding Claim 2, Kitano further discloses the first frequency component is a lower frequency component and the second frequency component is a higher frequency component having a frequency higher than a frequency of the lower frequency component.

Regarding Claim 3, Kitano further discloses a white noise generator (12) which will inherently contain frequency components in the range of 50 to 300 Hz and Kitano further discloses the low pass filter being several tens of hertz of higher (i.e. greater than 2 KHz.) Col. 5, lines 11-13).

Regarding Claim 12, Kitano further discloses an audio signal phase detection system for detecting signal phase reversals within an audio system, the audio signal phase detection system comprising: an audio signal source generating an audio signal having a first frequency component (Kitano discloses a white noise generator which

inherently will contain a first audio frequency component; Fig. 1, generator 10), a portion of the first frequency component having a selected polarity that is marked by a second frequency component that is distinguishable from the first frequency component (Kitano discloses a low pass filter and selecting a positive-phase or negative phase, Col. 5, lines 29-48), the audio signal source being coupled to provide the audio signal to the audio system; and a phase detector coupled to receive a representation of the audio signal from the audio system, the phase detector detecting the marking of the first frequency component the second frequency component and providing an indication as to whether or not the first frequency component has a selected polarity at the occurrence of the mark (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Regarding Claim 13, Kitano discloses An audio signal phase detection system for detecting signal phase reversals within an audio system, the audio signal phase detection system comprising: an audio signal source providing an audio test signal having a plurality of repetitive cycles of an audio signal, the audio test signal including a plurality of cycles of a lower frequency signal component having positive and negative polarity portions (Kitano discloses a white noise generator which inherently will contain a positive and negative frequency components; Fig. 1, generator 10) and with at least one of the polarity portions of a selected polarity being marked with a higher frequency signal component (Kitano discloses a low pass filter and selecting a positive-phase or negative phase; Col. 5, lines 29-48 at a frequency of several tens of hertz or higher; Col. 5, lines 12-13), the audio test signal being coupled to the audio system; and a phase

detector coupled to receive a representation of the audio test signal from the audio system, the phase detector detecting the higher frequency signal component and providing an indication as to whether or not the higher frequency signal component is coincident with the selected polarity of the lower frequency signal component (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Regarding Claim 14, Kitano discloses an audio signal phase detection system for detecting signal phase reversals within an audio system, the audio signal phase detection system comprising: an audio signal source including a recorded medium having an audio frequency test signal recorded thereon and a medium player reproducing the recorded audio frequency test signal (Kitano discloses a white noise generator which inherently will contain a positive and negative frequency components; Fig. 1, generator 10), the audio frequency test signal including a lower frequency signal component having a portion thereof of a selected polarity marked with a higher frequency signal component (Kitano discloses a low pass filter and selecting a positive-phase or negative phase; Col. 5, lines 29-48 at a frequency of several tens of hertz or higher; Col. 5, lines 12-13), the audio frequency test signal being communicated to the audio system; and a phase detector coupled to receive a representation of the audio frequency test signal from the audio system, the phase detector detecting the marking of the selected polarity of the lower frequency signal component by the higher frequency signal component and providing an indication as to whether or not the selected polarity of the lower frequency signal component is marked by the higher frequency signal

component (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Regarding Claim 15, Kitano discloses an audio signal phase detection system for detecting signal phase reversals within an audio system comprising: means for generating an audio signal having a first frequency component having a selected polarity (Kitano discloses a white noise generator which inherently will contain a positive and negative components; Fig. 1, generator 10) that is marked by a second frequency component that is distinguishable from the first frequency component (Kitano discloses a low pass filter and selecting a positive-phase or negative phase; Col. 5, lines 29-48 at a frequency of several tens of hertz or higher; Col. 5, lines 12-13), the audio signal source being coupled to provide the audio signal to the audio system; and a phase detector coupled to receive a representation of the audio signal from the audio system, the phase detector detecting the second frequency component and providing an indication as to whether or not the first frequency component has the selected polarity at the occurrence of the second frequency component (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Regarding Claim 16, Kitano discloses an audio signal phase detection system for detecting signal phase reversals within an audio system, the audio signal phase detection system comprising: an audio signal source generating an audio signal having a first, lower frequency signal component (Kitano discloses a white noise generator which inherently will contain a positive and negative components; Fig. 1, generator 10), a portion of the first, lower frequency signal component having a selected polarity that is

marked by a second, higher frequency signal component having a repetition rate less than 150 times per second (Kitano discloses a low pass filter and selecting a positive-phase or negative phase; Col. 5, lines 29-48 at a frequency of several tens of hertz or higher; Col. 5, lines 12-13), the audio signal source being coupled to provide the audio signal to the audio system; and a phase detector coupled to receive a representation of the audio signal from the audio system, the phase detector detecting the occurrence of the higher frequency signal component mark and providing an indication as to whether or not the first, lower frequency component has the selected polarity at the occurrence of the higher frequency signal component (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Regarding Claim 17, Kitano discloses an audio signal phase detection system for detecting signal phase reversals within an audio system having a recorded medium player, the audio signal phase detection system comprising: a recorded medium having an audio frequency test signal recorded thereon (Kitano discloses a white noise generator which inherently will contain a positive and negative components; Fig. 1, generator 10), the audio frequency test signal including a lower frequency signal component having a portions thereof of a selected polarity marked with a higher frequency signal component (Kitano discloses a low pass filter and selecting a positive-phase or negative phase; Col. 5, lines 29-48 at a frequency of several tens of hertz or higher; Col. 5, lines 12-13); and a phase detector coupled to receive a representation of the audio frequency test signal from the audio system, the received audio frequency test signal being generated the audio system in response to the audio frequency test signal

recorded on the recorded medium, the phase detector detecting the marking of the selected polarity of the lower frequency signal component by the higher frequency signal component and providing an indication as to whether or not the selected polarity of the lower frequency signal component is marked by the higher frequency signal component (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Regarding Claim 18, Kitano discloses An audio signal phase detection system for detecting signal phase reversals within an audio system, the audio signal phase detection system comprising: means for providing an audio frequency test signal having a higher frequency signal component and a lower frequency signal component (Kitano discloses a white noise generator which inherently will contain a high and low frequency components; Fig. 1, generator 10), with the higher frequency signal component occurring while the lower frequency signal component has a selected polarity, the audio frequency test signal being coupled to the audio system (Kitano discloses a low pass filter and selecting a positive-phase or negative phase; Col. 5, lines 29-48 at a frequency of several tens of hertz or higher; Col. 5, lines 12-13); and means for phase testing an audio frequency test signal coupled to receive a representation of the audio test frequency signal from the audio system, the means for testing providing an indication as to whether or not the higher frequency signal component occurs during the selected polarity of the lower frequency signal component (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Regarding Claim 19, Kitano discloses a method of detecting signal phase reversals within an audio system, the method comprising the acts of: providing to the audio system an audio frequency test signal having a higher frequency signal component and a lower frequency signal component (Kitano discloses a white noise generator which inherently will contain a high and low frequency components; Fig. 1, generator 10), with the higher frequency signal component occurring while the lower frequency signal component has a selected polarity (Kitano discloses a low pass filter and selecting a positive-phase or negative phase; Col. 5, lines 29-48 at a frequency of several tens of hertz or higher; Col. 5, lines 12-13); receiving a representation of the audio frequency test signal from the audio system; phase testing the received representation of the audio frequency test signal; and providing an indication as to whether or not the higher frequency signal component occurs during the selected polarity of the lower frequency signal component in the received representation of the audio frequency test signal (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Regarding Claim 20, Kitano discloses a method of detecting signal phase reversals within an audio system using a signal source and a phase detector, the method comprising the acts of: generating an audio frequency test signal with the signal source, the audio frequency test signal having a higher frequency signal component and a lower frequency signal component (Kitano discloses a white noise generator which inherently will contain a high and low frequency components; Fig. 1, generator 10), with the higher frequency signal component occurring while the lower frequency signal

component has a selected polarity (Kitano discloses a low pass filter and selecting a positive-phase or negative phase; Col. 5, lines 29-48 at a frequency of several tens of hertz or higher; Col. 5, lines 12-13); communicating the audio frequency test signal to the audio system (Fig. 1); receiving a representation of the audio frequency test signal from the audio system; phase testing the received representation of the audio frequency test signal; and providing an indication as to whether or not the received representation of the audio frequency test signal has the higher frequency signal component and the lower frequency signal component with the higher frequency signal component occurring during the selected polarity of the lower frequency signal component (Kitano discloses the listener, i.e. phase detector, detects the polarity of the frequency components, Col. 6, lines 25-42).

Claim Rejections - 35 USC § 103

4. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitano as applied to claim 1 above in view of Horn et al. ("Horn") (US Patent 4,648,113).

Regarding Claims 6-8, Kitano discloses a detection system but does not disclose a light providing an indication to whether or not the first frequency component has a selected polarity. Horn discloses a system providing a visual indication of a relationship between two signals to determine a proper polarity (Col. 2, lines 8-12) using a plurality of lights (Fig. 1, CRT). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a lights to provide indication of a polarity between two signal in order to determine proper polarity as taught by Horn.

5. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kitano.

Regarding Claims 9-11 it is well known in the art that audio signal sources may include recorded mediums and signal generators such as a compact disc system.

Allowable Subject Matter

6. Claims 4 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin Michalski whose telephone number is (703)305-5598. The examiner can normally be reached on M-F 7-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (703)305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SINH TRAN
SUPERVISORY PATENT EXAMINER

JIM